[illegible]



جامعة اليرموك

[illegible]

[illegible]

[illegible]

[illegible]

The Status of Using Modern Information and Communication Technology Tools at Tabouk University as Perceived by Students

[illegible]

[illegible]

[illegible]

[illegible]

2013 [illegible]

واقع استخدام أدوات تكنولوجيا المعلومات والاتصالات الحديثة في جامعة تبوك من وجهة نظر الطلبة

إعـداد

عبد الله بن مفلح العنزي

بكالوريوس العلوم في نظم المعلومات، جامعة فهد بن سلطان، 2011.

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وافق عليها

عماد محمود الشوافقه .... مشرفًا ورئيسًا

أستاذ مشارك في نظم المعلومات الحاسوبية، جامعة اليرموك

يوسف احمد عيادات ....عضواً

أستاذ مشارك في تقنيات التعليم، جامعة اليرموك

طارق يوسف جوارنه ....عضواً

أستاذ مشارك في مناهج التربية المهنية وأساليب تدريسها، جامعة اليرموك

تاريخ مناقشة الرسالة

2013 / 7 / 7

ب

الإهـــداء

إلى من دفعني إلى العلم وبه ازداد افتخاراً

أبـــي

وإلى من يسعد قلبي بلقياها

أمي

وإلى من هو أقرب إلى روحي

إخواني وأخواتي

وإلى من آنسني في دراستي وشاركني

همومي تذكاراً وتقديراً أصدقائي

وإلى أخي الذي لم تلده أمي

(فواز)

الباحث

عبدالله بن مقلح العنزي

شكر وتقدير

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

5ƟűDŽǁƐ ƕDŽƏƑ5

[illegible]

[illegible]

[illegible] .2013

[illegible] (12870) [illegible] %5 [illegible]

[illegible] (644) [illegible]

[illegible] (DATASHOW) [illegible]

[illegible]

ŀƑöǇj ƇǴư ƵĐ ƘǴƵǴǀp" Ĭ ǁƵ ƒ ǀjk Ŏk!ƒĂ (66) Ǆƿƨ ǀƨǀ5!ƒ Ǖöǁp ŀƶ5kƨǆ ŀɳƨƥƕĂ Ĭ!ĂŪƒ ŀƕkƨǆ!Ǵƕ

."ǀƨ ưǴơǆ!ƒ ŎǇj ƩöƨƥkǁǃŀǁöƪĂ ý ư5Đ ǇĐ Ʃöƨƥk!ƒ

Ʃǀjɳǁ! ăƨƶk ŀöƑǴƮơƍ ŀ!Ǔƥ ƘƒƦ ƾĂƨ5 ƥĂɳĂ ǋƑǴkǀj!ƒ Ƙǀjöƕ ƥǀ5 ǁ!Ʀ Ĭ!ƍ ŀ5Ǵư ŰǴƕ

Ĭ ǁƵ ǇöǆƑǴǀ!ƒ ǀĂƵƥƕ ŀƪƒƨƥ!ƒ ƘƮĂĐ ƥpĂ .ŀöǁǂ! ăƨƶk ƾĂƨ5 ŀöĐ ƥĂɳĂ ǓĂ Ǖŀ ǴǀjŰƒ ƠǴƮ!Ă

ƘƒĂƥǆƕ ǴǌkǴöǁǂĂ ŀƶǆǴɳ!ƒ ƥöĂƨk! ŀöɳökƒƨkƪƍ ŀƱƤ Ŏǀjƕk Ĭ!ƍ ǁĂƕk ŀƶǆǴɳ Ŏ5 ƱöƱƤk!ƒ

ƔöƨƥkĂ ǕŀƕǁƱ!ƒ ǅöǁƶkĂ ǅǁƶk ƘǴöǁǆƵ Ŏ5 ǴǌǆƒƥƤkƪǓ ƘŬǴƮkŬƒĂ ƘǴǆĂǁƶǆ!ƒ Ǵöɳ Ă!Ăǀj ǂk

ƘǴǆĂǁƶǆ!ƒ Ǵöɳ Ă!Ăǀj ǂk ƘƒĂƥĐ ǅƒƥƤkƪƒ Ĭ ǁƵ ǁĂƕk ŀƶǆǴɳ Ŏ5 Ʃöƨƥk!ƒ ŀƑöǇj ƇǴư ƵĐ

ƘƒĂƥĐ ǅƒƥƤkƪƒ ƴƥƒĂ ǇƵ ƨƮǂǁ! ăƨƤĐ ŀƪƒƨƥ ƇƒƨɳƍĂ ǓĐöǁƶk!ƒ Ŏ5 ŀƛöƥơ!ƒ ƘŬǴƮkŬƒĂ

.ăƨƤŪƒ ŀöƥĂƶƪ!ƒ ƘǴƶǆǴɳ!ƒ Ŏ5 ŀƛöƥơ!ƒ ƘŬǴƮkŬƒĂ ƘǴǆĂǁƶǆ!ƒ Ǵöɳ Ă!Ăǀj ǂk

ŀƕǁƱ!ƒ .ǁĂƕk ŀƶǆǴɳ .ŀƛöƥơ!ƒ ƘŬǴƮkŬƒĂ ƘǴǆĂǁƶǆ!ƒ Ǵöɳ Ă!Ăǀj ǂk ƘƒĂƥĐ :ƕǓƟƑŀƧĐǆǁƐ ǀƑĐǆǂǁƐ

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Information and [illegible] Communication Technology (ICT) [illegible]

[illegible] ([illegible])[illegible]

.(2005[illegible]

[illegible]

[illegible] (E-learning) [illegible]

[illegible] (Virtual Classroom) [illegible]

[illegible]

[illegible]

[illegible] (Blended Learning) [illegible]

.(2007 [illegible]

[illegible] (Couch, 2006) [illegible]

Virtual) [illegible]

[illegible] (Reality

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] ([illegible]) [illegible]

Ŧǒ!Ǘƒ ƘǴƕƪǴơ!ƒ ǅƒþƤƙƪƒ ƭǒƕƱƙǍ ƧƬǉ Ĭ!ǫ ƳǍƧƬǆ!ƒ ƒƦǋ ƻþǌǒǍ Ü2002 ǄǴƵ Ŏ5 ƨǒƨƨ!ƒ þƕƵ

ǄǴƵ Ŏ5 Ŏ!Ǘƒ ƔƪǴơ! ƧƬƵ ƩþǴƪ!ƒ ƧǆƙƋǆ!ƒ ĬƮǍ ǴǆǂǂŦ ÜŦǂǆǆ!ƒ ƘǴƵǆǴƞǍ ƩƧƒþǆ Ŏ5

ÜǄǴƵ!ƒ ǄǒǄƵƙ!ƒ ƩƧƒþǆ ƴǒǆƞ Ŏ5 ƘǉƧƙǉǗƒ Ŧǆþ Ƥ ƴǴƤþƕ ƯǴƧ!ƒ Ŏ5 þǀƵ ĭƦ!ƒ 2001

ǅǍǄƵǄ! ƨǒƨƨ!ƒ þƕƵ ǁǆǆ!ƒ Ŧǉǒþǆ ƴƕp ǇǆǄ ŦǆþƤ!ƒ ǉƦǋ ƧǒǍƙ ǀƧǍƧƯǍ ÜƘǴƵǆǴƞ!ƒǍ ƘǴǒǂŦ!ƒǍ

.(2003 ÜŎ5ƒǍǆ) ŦǂǂǆǆǄ!ǴƕƘǴǒǂŦ!ƒǍ þǋǴƵǆ!ƒǍ ƩƧƒþǆ!ƒ Ŧ5ǴŦ! ǴǉǴƞǆ Ŧǒǉǀƙ!ƒǍ

ƴǖƤ ǇǆǄ ƘǗǴƮƙǗƒǍ ƘǴǆǍǂƵǆ!ƒ ǴǒƞǍ!ǍǉŦƙƕ ŦǒþǍƵƪ!ƒ ŦǒƕƧƵ!ƒ ŦǂǂǆǆƵ!ƒ ǄǴǆƙǋƒǍ ƨƧƕǒǍ

International Data) ƚǴơƕǖ! ŦǒǆǄǴƵ!ƒ IDC ŦƪƪǆǆǄ ǊƙƧƬǉ ĭƦ!ƒ ƧǒƧǀƙ!ƒ

ŦǂǂǆǆǆƵ!ƒ Ŏ5 ƘǴǆǍǂƵǆ!ƒ Ŧǒǉǀƙ ĬǂƵ ƭǴƨǉǗƒ Ǆƞơ ǇǄ ƧǒƤǕƒ ǴǋƧǒƧǀƙ Ŏ5 (Corporation

ÜǴǒǍǉƪ %8.5 ƸǂǆƙƁ ǀþǴǒƨƕ ĭǄ Ü2012 ǄǴƵ Ŏ5 ƴǴǒƧ ƧǴǒǂǆ 9.4 Ĭ!ǫ ƴƮǍ ŦǒþǍƵƪ!ƒ ŦǒƕƧƵ!ƒ

.%7.9 ƸǂƕǒǍ ĭƦ!ƒǍ ǴǀǒƧ5ǄǍ ƱƪǍǗƒ ƭƧƬ!ƒ Ŧ!ƱǉǆǄ! ƴpǍǆǆ!ƒ ǍǆǉǉƪƱƪǍǆǆ ƨǍǴƞƙǒ ǴǆƕƁ

ƸǂƕǒǍ ƔŦƧǆ ĭǍǉƪ ǍǆǉǉƪƕƁ ÜŦǒƕǴƞǒǫ ƴǒǍƱ!ƒ ǎþǆ!ƒ ĬǂƵ ǴƒþǕƒ ƘǴƵpǍƙ ƘǉǴŦ ǴǋƧǍþƕǍ

.2016 ǄǴƵ!ƒ Ŏ5 ŦǒǋǉǉǆǄ!ƒ ƘƒǍǉƪ ƩǆƤ!ƒ ǀƧƙ5! %11

ƭǴ5ǉǗƒ ƚǒơ ǇǆǄ ĬǂƵǕƒ ŦƑ5!ƒ ƴƛǆǒ ƴƒƨǒ Ǵǆ ǀƨǋƞǗƒǍ ƘƒþƵǆ!ƒ ƳǴƱp ǇǄ ǇǆǄ ǄƸƧ!ƒ ĬǂƵǍ

Ŧǒǉǀƙ ƘǴǆþƤ ŎƵǴƱp ƠƒǴƮ! ǴǒƞǒƧþƙ ƒ pǴǉǀƙ ƭǍƪ!ƒ Ŏ5 ǊƙƮơ ǇǄ Ǘǫ ÜƘǴǆǍǂƵǆ!ƒ Ŧǒǉǀƙ ĬǂƵ

ƺƧǒƕŦ ǴǒǍǉƪ ƺǍǆǉǉ 2013 ǄǴƵ ŦǒǴǌǉ Ŏ5 ƭǀơƙƪ ǴǋǉǄ ƴpǍǆǆ!ƒ ǇǆǍ ÜǇǆƒƧƕ!ƒ ƘǴpǴƕǍ ƘǴǆǍǂƵǆ!ƒ

.(2013 ÜŦǒþǍƵƪ!ƒ ŦǒǉǍƧƙŦ!Ǘƒ ŦǆǍŦơ!ƒ) Ŏ!ƒǍƙ!ƒ ĬǂƵ %14.3 Ǎ %14.7 Ĭ!ǫ ƴƮǒ

ƘǴǆǍǂƵǆ!ƒ ǴǒƞǍ!ǍǉŦƙƕ ǄǴǆǄƙǉǗǴƕ ǄǴƵ!ƒ ǊƞǍƙ!ƒ ƒƦǋ ŦǒþǍƵƪ!ƒ ƘǴƵǆǴƞ!ƒ ƘǉƕƙƁ þpǍ

ƘǴǒǉǀƙ! ƧǆƙƪǆǄ!ƒ ƧǒǍƱƙ!ƒǍ ƚǒþơƙ!ƒ ƘǴǒǂǆƵǍ ÜƘƒƧþǴƕǆ!ƒǍ ƱƱƤ!ƒ ŦƵǍǆƞǆ ƧƕƵ ƘǗǴƮƙǗƒǍ

ǁĂhƙ ƚƶdžĜɳ ƘŬĜƮƙŬƒĂ ƘĜdžĂǁƶdž!ƒ ĜōɳĂ!Ăǉǂƙƕ ƘdžƙNjƒ Ŏƙ!ƒ ƘĜƶdžĜɳ!ƒ ǉŖNj LJdžĂ ÜĜnjō5 ƚdžþƤƙƪdž!ƒ

ƚƶdžĜɳ!ƒ ýōĂơƙ ŎNj ƚơưƒĂ ƚōƌƧ Ă ƚ!ĜƪƧ ĜnjōǉōƵ ƔƮǉ Ƙƶ ưĂ (2006) džĜƵ ĜnjƙđTǉ ŖǉdžĂ Ŏƙ!ƒ

ĜōɳĂ!Ăǉǂƙ!ƒ ƻōƲĂƙ ƔǉĜɳ Ŏ5 Ŏǁơdž!ƒ ăĂƙƪdž!ƒ Ĭǁ Ƶ ƨōdžƙ!ƒ ƽōlơƙ Ă ýdžĜǂƙdž ŎdžþƧ ƴdžƙɳdž Ĭ!ǫ

.(2013 Üǁ Ăhƙ ƚƶdžĜɳ) ŭōǁƶƙ!ƒ Ŏ5

ƚōǉlƙ lþơĂƕ ƚǁƛdžƙdž ĜnjFĜTǉǫ Ŗǉdž ǁĂhƙ ƚƶdžĜɳ Ŏ5 ƘĜdžĂǁƶdž!ƒ ƚōǉlƙ lþĜdžƵ ƘdžĜp þl5

ÜĜnjō!ǫ ĂƕƮƙ Ŏƙ!ƒ ƻƒþNjŪƒ ƽōlơƙ Ă ĜnjƙĜƶǁƱƙ Ă ƚƶdžĜɳǁ! Ĝōǁƶ!ƒ lƧƒþÚƒ ăƌƧ ƽōlơƙ Ĭ!ǫ ƘĜdžĂǁƶdž!ƒ

Ĭ!ǫ ƚōþōǁlƙ!ƒ Ƙŭdžĝƶƙ!ƒ LJdž ýĂơƙ!ƒ Ă ýdžĜǂƙdž ŎdžþƧ ƴdžƙɳdž Ĭ!ǫ ƚƶdžĜɳ!ƒ ýōĂơƙ ĜnjdžNjD LJdžĂ

lþĜdžƵ ƘdžĜp ƒŖ! .ĜnjōƽƲĂdžĂ ƚƶdžĜɳ!ƒ ƚƕǁƱ Ĭ!ǫ ƚōǉlƙ!ƒ ƘĜdžþƤ!ƒ ƚơĜƙǫ Ă ƚōǉĂƧƙǂ!Úƒ Ƙŭdžĝƶƙ!ƒ

LJōōŭdž!ƒ ƘƒƧTƵ Ĭ!ǫ ĜnjƙƽǁǂƙƘǁƮĂ ƴōƧĜTdž!ƒ LJdž Ƨōƕǂ þþƵ ŖōƽǉƙƕĜnjFđTǉǫ Ŗǉdž ƘĜdžĂǁƶdž!ƒ ƚōǉlƙ

ǁ!ŖĂ ƚōƙƒŖ! lþĜdžƶ!ƒ þĂnjɳƕ ĂD ƒ ĜƤ!ƒ ƳĜƱl!ƒ ƘĜǂƧT LJdž þōþƶ!ƒ ƴdž LJĂĜƶƙ!Ĝƕ ƘŬĜōƧ!ƒ LJdž

ƴōƧĜTdž!Ĝƕ ƚdžƑĜp Ŏǁō Ĝdžō5 Ă .ƚƶdžĜɳ!ƒ Nō!ǫ ĂƕƮƙ Ĝdž ƽōlơƙ Ă ĜnjƶưĂ džƙ Ŏƙ!ƒ ƱƱƤ!ƒ Ŗōƽǉƙ ƻþnjƕ

:(2013 Üǁ Ăhƙ ƚƶdžĜɳ) ĜNjŖōƽǉƙƕ ƘĜdžĂǁƶdž!ƒ ƚōǉlƙ lþĜdžƵ ƘdžĜp Ŏƙ!ƒ

1) ƨǂƧdž ƔƪĜơ!ƒ Ŏ!Ŭƒ.

2) ƚōǉƕ!ƒ ƚōƙơ!ƒ.

3) ƘĜdžþƤ!ƒ ƚōǉĂƧƙǂ!Úƒ ƚōƪĜƪŪƒ.

4) ƘƒƧhƙƤdž ƔƪĜơ!ƒ Ŏ!Ŭƒ Ă ƚƷǁ!ƒ ƚōƨōǁɳǉÚƒ.

5) ƚdžƲǉŪƒ ƚōdžþƤ!ƒ.

6) ƴōƧĜTdž!ƒ Ŏƙ!ƒ džƙ ĜNjŖōƽǉƙƕ Ĝƶƙ!Ĝƕ þpƴdž ƘĜǂƧT ƳĜƱl!ƒ ĜƤ!ƒ ƒ .

[illegible]

-1 [illegible]

-2 [illegible]

-3 [illegible]

-4 [illegible]

-5 [illegible]

-6 [illegible]

-7 [illegible]

-8 [illegible]

-9 [illegible]

[illegible] -10

[illegible]

[illegible] -11

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

1. [illegible]

[illegible]

2. [illegible]

[illegible]

3. "[illegible]

[illegible]"

4. [illegible] ($\alpha \leq 0.05$) [illegible]

[illegible]

."[illegible]

[illegible]

[illegible]

- [illegible]

.[illegible]

- [illegible]

.[illegible]

.2013-2012

.2013-2012

ǸdžƒƧŀĂ ƔĂƪƠơ ƖƨnjƞƋ ǈdž ƋǆƤƘƪŏ ƠdžƴǒdžƞŎNj : ƖŰƑƬƗŰƐNj ƖƑDžNjǂƴDžǁƐ ƑƮƜNjǁNjǆǀƗ ƖƐNjǭƈ

ƗƑöNj ƇƠưƵƋĂ ƗŀǁƱ!ƒ ǇŏŀƘƠdžĂǁƶdž!ƒ ýþƠŀƙĂ ýǀǇ ƗŏǁdžƵ Ŏ5 ƗƛŏþơƘƒĂþƋĂ ƖƨnjƞƋĂ ƗŏŀĂƪƠơ

. ǁĂŀƙ ƗƶdžƠƞ Ŏ5 ƩŏƧþƙ!ƒ

.(1999

(Boundless)

.(2008

(ICT)

.(2003

.(2010)

%21 %55

%15

.(2004) 200

(Techno) (Logos)

.(2001)

.(2005 [illegible])

.(2002 [illegible])

[illegible] (2005) [illegible]

[illegible] (2008) [illegible]

[illegible] (2004) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (2002) [illegible]:

1. [illegible]: (Processes) [illegible].

2. [illegible]: (Products) [illegible]

[illegible].

3. [illegible]:

[illegible].

[illegible]

[illegible]

[illegible]

[illegible] (2008).

[illegible]

[illegible] (Williams, 1995) [illegible]

.(2005

(2004)

1.

2.

3.

4.

5.

6.

7.

[illegible] .(Christopher, 2003) [illegible]

[illegible] .(Harris, 2000)

[illegible] (2008) [illegible]:

[illegible] (1

[illegible] (2

[illegible] Video Tutorial [illegible] Interactive Video [illegible]

[illegible] (3

[illegible] (Video Conference) [illegible]

[illegible]

[illegible]

[illegible]

[illegible] (4

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

.(1994 [illegible]

Ǒdžŋƶ!ƒĂ ǇǴʅơ Ǵnjö!ǫ ƧǴƬ ƒ ƑǴƮƤ!ƒ ǁǃǨǖ ƱǖǨƧǨ ǄǴnjdžĂ ƪƧƒĂƥ Ǒùƶdžǵŋ!ƒ ƦǴǨʅǖ!Ă

:ǑǨǕƒ Ăơǉ!ƒ Ǐǃƶ (2007)

-1 ƧĂƥ!ƒ Ǒʅŏƨƥǩ!ƒĂ Ǒ5Ƨƶdž!ƒĂ :Ǒ5Ƨƶdž Ǒʅŏơǖ ƚǂƨŏ ƪǂƨ ǂǴǩ!ƒĂ Ǒƶdžǵŋ!ƒ ƦǴǨʅǕƒ ǏǃƵ ǋǨǖǃƱ ǏǨƬǖ ǅǌƶƒĂǉ

ýĂƮǕƒĂ ƘǖƒĂƛ!ƒ ǈdž ƫǃƱǉö ĭƦ!ƒ ǑƵƒĂ!ƒ Ǒdžǃƶ!ƒ Ƨöǂƽǩ!ƒ ǅnjöƥ! ǑdžǉöĂ ǗǅnjǩƒƧǴǩƵƒĂ

.ǑǩƒƦ!ƒ ǅöǃƶǩ!ƒ ƘƒƧǴnjdž ƔǴʅǩǂƒ ǏǃƵ ǅǋƥƵǴʅöĂ ǕƗödžǖʅǕƒ

-2 ƧĂƥ!ƒ :Ǒƛơǖ!ƒ ƒƦǋĂ ƔǃƱǩö ǈdž ĂưƵ ƗƑöǋ ƩöƧƥǩ!ƒ ǅöƥǉǩ ƚǴơǖǕƒ Ɨödžǃƶ!ƒ ʅƧǂǩǖdž!ƒ

ƨƒƧǖǫĂ ǕƗöƥĂƶʅ!ƒ ƘǴƶdžǵŋ!ƒ Ǒ5 Ǒdžǃƶ!ƒ ƚơǖ!Ǵǖ ǇǴǉǩƧǕǴǖ ǅnjʅǩ Ǒǩ!ƒĂ Ǖʅƨödžǩdž!ƒĂ

.ǊǃǑǃöƮǩdž!ƒ ƔǉǴŋ!ƒ

-3 ƧĂƥ!ƒ :Ǒŋnjǉdž!ƒ ƒƦǊĂ ƔǃƱǩö ǈdž ĂưƵ ƗƑöǋ ƩöƧƥǩ!ƒ ýdžƶ!ƒ ǏǃƵ Ǒ5 ƗƂƧǴƬdž!ƒ

ʅƧƥ!ƒĂ ǕƗƵƧǴʅǩdž!ƒ Ɨödž!Ǵƶ!ƒ ƘƒƧĂƱǩ!ƒ ýdž ƗöƬǴdžǩdž ǇĂƂǩ! ǴnjǃdžǴƂǩĂ ǊǊǌǴǉdž!ƒ ƧöĂƱǩ

.ǊǊǌǴǉdž!ƒ ǁǃǩ Ǒ5 ǇǴƂdžǕƒ Ƨƥǃǖ ǑdžǖʅǕƒ ƔǉǴŋ!ƒ ǇǑdž ưǩ ǏǃƵ

-4 ƧĂƥ!ƒ :ĭƧƒƥǕƒ ƒƦǊĂ ƔǃƱǩö Ǒ5 ƗƂƧǴƬdž!ƒ ʅƧƒƥǕƒ Ǒ5 ƗöƶdžǴŋ!ƒ Ǒ5 ƻǃǩƤdž ýƥƒĂdž!ƒ

.ƗödžöƥǴƂǕƒ

-5 ƧĂƥ!ƒ :ǑǉƱĂ!ƒĂ Ǒƶdžǩŋdž!ƒ ƔǃƱǩö ǈdž ĂưƵ ƗƑöǋ ƩöƧƥǩ!ƒ ƗdžǊǴʅdž!ƒ ƗǃƵǴ5!ƒ Ǒ5

ƧöĂƱǩ!ƒ ǏǃƵ ǅdžǩĂă ǇƱĂ!ƒ Ǒ5 ýödžŋ ƘǕǴŋdž!ƒ ƚǂ ý ƔʅơǕƒ ƮǴƮǩƤƒ ǗǊƬƧƶǩ!ƒĂ ƻƧƻ

.Ǵnj! ƗödžǃƶǑ!ƒ ýĂǁơ!ƒ ƥǴŋöǫ Ɨ!ĂǴơdžĂ ýdžǩŋdž!ƒ ƘǖǂƬdž ǏǃƵ

-6 ƧĂƥ!ƒ :ǑǩǴdžĂǃƶdž!ƒ ƔǃƱǩǩĂ ƩöƧƥǩ!ƒ ƗƑöǋ ĂưƵ ǈdž ƔǃƱǩ ǑƒƥƤǩʅƒ ǕƒƦƮǋʅǕƒ ƗöʅǴƥǩ!ƒ

.Ǉöƨödžǩdž ǇöŋǩǊdž Ɨǂǃƫ ǊöƧƤǩ! ǴnjƽöǓĂǩĂ Ɨƛöƥơ!ƒ

-7 [illegible]

[illegible] (1999) [illegible]

[illegible] (2003) [illegible]

[illegible]

[illegible] .(Chen, 2000)

[illegible]:

1- [illegible]

2- [illegible]

3- [illegible]

4- [illegible]

5- [illegible]

6- [illegible]

8- [illegible]

9- [illegible]

10- [illegible]

[illegible]:

1- [illegible]

2- [illegible]

3- [illegible]

4- [illegible]

5- [illegible]

[illegible]

.(2003 [illegible]) [illegible]

[illegible]

[illegible]

[illegible] (2000) [illegible]

[illegible]

[illegible]

[illegible] (2003)

.(2011 [illegible]) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

.(2010 [illegible]) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

lƧƒƨĂ!ƒ Ƙƺƪ ƥl5 ÜǏǉǆdž!ƒ Ɨ5Ƨƺdž!ƒ ƥƈƮƙƿƒ DžŏNjƈ5dž ƣŏƪƧƙ Ɨǉŏƪ Ă NJǉĂǂ!Ă ÜDžĂǉƺ!ƒ ƘŬƈƞdž

ÜƈnjŏƼ Ŏdžǉƺ!ƒ ƚƠǉ!ƒ ƨǂƒƧdž ƧŏĂƱƙ ýŭƤ Ǉdž Ŏdžǉƺ!ƒ ƚƠǉ!ƒ ƗdžƥƤ Ŏ5 ƘƈƺdžƈƞÜƒ ƧĂƥ ƨŏƨƺƙ!

:ŎƙŬƒ (2011) ƗŏƥĂƺƪ!ƒ Ŏ!ƈƺ!ƒ DžŏǉƺƘ!ƒ lƧƒƨĂ Ƙƒ ƧĂƬǇdž ƈnjƪǂƺƙ ƈdžǂ ƧŏĂƱƙ!ƒ ƱƈdžǇƊ ǇdžĂ

- .ƈnjƙƈǇ ươƈƠĂ ƗŏǇlƙ!ƒ ƭƑƒƥƠĂ ƗŏdžǉƺǉƗ!ƒ ƭƑƒƥƠ!ƒ

- .ǇƥƈƺdžǉƒĂ ýĂƧƙǉǉ! ƥnjƼ ǁǉdž!ƒ ƗƺdžƈƞǉƗŏǇlƙǉ! ǇƒƧnjƱ!ƒ ǐƥƒĂ

- .ƥĂƺƪ ǁǉdž!ƒ ƗƺdžƈƞǉƔƪǂ ƳĂƧƬdž

- .ƨŏƨƺ!ƒ ƥǉƵ ǁǉdž!ƒ ƗƺdžƈƞǉlƧĂƱƙdž!ƒ Ɨŏdžǉƺ!ƒ ƗlŏƥƠ!ƒ ƳĂƧƬdžĂ

Ŏ5 lƧƒƨĂ!ƒ ƘƵƧƬ ƥl5 ÜǐƥĂƺƪ!ƒ Ŏ!ƈƺ!ƒ DžŏǉƺƘ!ƒ ƗdžĂƱǇdž ƧŏĂƱƙ Ŏ5 ƧƒƧdžƙƪŭ!Ă

ĂNjĂ ÜƗdžƥƈl!ƒ Ɨǉƪ ǇŏƧƬƺ!ƒĂ ƩdžƤǉ! Ŏƺdžƈƞ!ƒ DžŏǉƺƘǉ! ƗŏǉǉlƙƪdžƗŏƞŏƙƒƧƙƪƺ ƗƱƤ ƥƒƥƵƺ

Ŏ5 Ŏ!ƈƺ!ƒ Džŏǉƺƙǉ! lƧŏǂ!ƒ ƘƒƧĂƱƙ!ƒ ǉƦNj ƘƪǂƵ ƥl! (ƭƈ5ƈ ƳĂƧƬdž) Džƪƒ ƦƤƙƒ ǐƦ!ƒ ƳĂƧƬdž!ƒ

ǇŏƼŏƧƬ!ƒ ǇŏdžƧƠ!ƒ DžƥƈƤ Ǉƥ! Ǉdž ƧŏǉǂǉƗ DžƈdžƙNjŬƒĂ ƗdžŏƧǂ!ƒ ƗŏƈƵƧ!ƒ ƗŏƥĂƺƪ!ƒ ƗǉŏƧƺ!ƒ ƗǂǉdždžǉƗ

.(2006 ÜNjŏƵƥ!ƒ) lƥŏƬƧ!ƒ ƗŏƥĂƺƪ!ƒ ƗdžĂǂƠ!ƒĂ ǇŏdžŬƒ ǉƥnjƵ Ŏ!ĂĂ

Ŏ5 Ŏ!ƈƺ!ƒ Džŏǉƺƙ!ƒ DžƈƱǉ! ƗǉdžƈƬ ƧŏĂƱƙ ƗŏǉdžƵ ƇƒƧƞǉ Ŏ!ƈƺ!ƒ Džŏǉƺƙ!ƒ lƧƒƨĂ ƘdžƈƥĂ

ƒƦNj NJƞƒĂƙ Ŏƙ!ƒ ƘƈŏƥƠƙ!ƒ Ɨƞ!ƈƺdž ýĂƈǉƙƙ ăƥdž!ƒ ƗǉŏĂƱ ƗŏǉlƙƪdžƗƱƤ ƧŏĂƱƙǉ ǁ!ƦĂ ÜƗǂǉdždž!ƒ

Džŏǉƺƙ!ƒ ƳƈƱƥ ƈnjǉdž ŎǉƈƺŏŎƙ!ƒ ƧĂƮl!ƒ ƔǉƒĂƞ! ƗƺƞƈǉƗ!ƒ ýĂǉơ!ƒ ƥƈƞŏŬ ÜNJlƒƥŏlƺƙ ýǂǉ DžƈƱǉ!ƒ

ƒ ƈƮƙƤŬƒ ǐĂƦ Ǉdž ƗǉƤǉ ƥƬơ ƭŏƧƱ Ǉƺ ƗŏǉƈƞŏŰƒ NJǉǉƒĂƞ ƗŏdžǉƙĂ ǉƧŏĂƱƙ! Ŏƺƪ!ƒĂ Ŏ!ƈƺ!ƒ

ÜƳĂƧƬdž!ƒ ƘŬƈƞdžǉ Ɨƥŭƺ!ƒ Ƙƒ Ɨŏƞŏƙƒƪƙ ŰƒĂ ƗŏdžŏƥƈǂŰƒĂ ƗŏƧŏĂƱƙ!ƒ ƘŬƈƞdž!ƒ Ŏ5 lƧǉƤ!ƒĂ

lƧƒƨĂ!ƒ ƔǉƈƞǇdž ƧƈŏƙƤŬƒ ƴƥĂ ƥƥĂ .ŎǉƙƙdžǉƒƒƥƮƧ!ƒĂ ƚƠǉ!ƒ Ŏ5 ǇŏƮƧ ƔĂǉƪǇ ƳƈǉƙƼǉ ǁ!ƦĂ

ƗƱƤ!ƒ) ƳĂƧƬdž ƦŏƼǇƙǉ DžƈŏƱl! ǇƥƈƺdžǉƒĂ ýĂƧƙǉǉ! ƥnjƼ ǁǉdž!ƒ Ɨƺdžƈƞ Ŏ5 ƚĂƠǉ!ƒ ƥnjƺdž ǏǉƵ

- [illegible]
[illegible]
[illegible]

- [illegible]
[illegible]
[illegible]
[illegible]

- [illegible]

- [illegible]
[illegible]
[illegible]
[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] (Projector) [illegible]
[illegible]

ĂĐ ΣǉƧƽǉĂǂ Ăǒƥǒƽǃƒ ƘǴƵǴƥ Ǒƽ ĂĐ ǂǶǁƱĂ ǇǒƧƜǴƠǆ ǇǆǆΣǒƧƥǨǃƒ ƘǴƵǴƥ Ǒƽ ƯƧƶǃƒ

ƱƑǴƪĂǃƒ ƯƧƵ ƨǴǌƞǶ ǑǆƪĂ Ü ƔĂƪǴƠǃƒ ǇǆǆǂǒǉĂƧǨǂǃǕƒ ƯĂƧƶǃƒ ǅǒƥǀǨ Ǒƽ ǇǒƬƬƤǨǆǃƒ

ƖƥƶǨǆǃƒ ƱƑǴƪĂǃƒ ƯƧƵ ƨǴǌƞ ǅƒƥƤǨƪǴǶƽ ƱǒƪĂ ǇǆǆƧƛǂĐ ǇǆǆƯƧƶǒ ǋǉǛ ƖƥƶǨǆǃƒ

ăƧƤĐ ƖƨǌƞĐĂ ƨǴƽǁǨǃƒ ĂĐ ĂǒƥǒƽǃƒĂĐ ƔĂƪǴƠǃƒ ƨǴǌƞ ǇǆǆƯƧƶǃƒ ǁǉǂǆǒ (Projector)

.ǇƥǒƥƵ

ǂǒǆǒǁƶǨǃƒ ǂǒƞĂǃĂǉǂǨǃƒ ǂƑǒǶǃƒ ǇǒƪƠǨ Ǒƽ ƨǒƨƶǃƒ ƥǶƵ ǇǶ Ÿƒ ƥǶƵ ǁǁǆǃƒ ƔĂƧƬǆ ǅǌƪĐ ƥǀ!

Ǒƽ ƘǴƶǆǴƞǃƒ ƒǦ ǉǆƵ ǀǁƵ ǑǨǕƒ ƧǒƽĂǨ :ĂǋĂ ǆǴ ƾƽǨǒ ǉǆ ǇƑǴǨǉ ǊǉǊǉ ƧƥǃƒƪǂƑ:

- ƖƨǌƞĐ ƯƧƵ ƘǴǉǴǶǃƒ (DATASHOW) Ǒƽ ƘǴƵǴǃǃƒ ǂǒƪǒƧƥǨǃƒ.
- ǂƶǆǴƞǃƒ ƖƨǌƞĐ ƔĂƪǴƠ Ǒƽ ǂƽǴǂ ƘǴǒǁǂǃƒ.
- ǂǆƥƤ ƥǒƧǶǃƒ ǑǉĂƧǨǂǃǕƒ ǴƤǃƒ ƒ ƘǴƶǆǴƞǃǶ.
- ǇƧĂǶƪǃƒ ǂǒǉĂƧǨǂǃƒ Ǒƽ ƘǴƵǴǃǃƒ ƥǒƪǒƧƥǨǃƒ.
- ǂǆƥƤ ǂƠǶǃƒ ǏǁƵ ǂǂǶƬ ƘǉƧǨǉǕƒ.
- ƬǴƬǴƘ ƯƧƵ ǁǒǆǒǁƶǨ.
- ƝǆƒƧǶǃƒ ǂǶĂƪǴƠ ǂǽǁǨƤǆ ǇǂǆǒƒƥƤǨƪǴ Ǒƽ ǂǁǆǆƶǃƒ ǂǒǆǒǁƶǨǃƒ.
- ƒƥƤǨƪǉƒ ƱƑǴƪĂǃƒ ƖƥƶǨǆǃƒ Ǒƽ ΣǒƧƥǨǃƒ.
- ƘǆƞƧĂǃƒ ƘǴǒǆƞǆǃƒĂ ǂǒǉĂƧǨǂǃǕƒ.
- ƘǴǆƥƤ ƘǁƒǬ ƬƒǶƵ ƘƒƧǒƥǂǃƒ ǂǆƒƧƤǃƒ.
- ƘƒƧǶƤǆǃƒ ǂǶĂƪǴƠǃƒ.

[illegible]

[illegible] (Jankowska, 2004) [illegible] 100 [illegible] 149) [illegible] (249) [illegible] (%75) [illegible]

[illegible] (2004) [illegible] (90) [illegible] (32) [illegible]

[illegible] (2010) [illegible]

[illegible]

[illegible]

[illegible] (38) [illegible]

[illegible] (110)

[illegible]

[illegible] (2.57) [illegible]

[illegible] (3.76) [illegible]

[illegible]

[illegible] .3,43 [illegible]

[illegible]

[illegible]

[illegible]

[illegible] -

[illegible].

[illegible] (2002) [illegible]

[illegible]

[illegible] (%50) [illegible]

[illegible] (%45) [illegible]

[illegible] (%66) [illegible]

[illegible] (%75) [illegible]

[illegible] (%50) [illegible].

[illegible] (Heimlich, 2003) [illegible]

[illegible]

[illegible]

[illegible]

.[illegible]

[illegible] (2005) [illegible]

[illegible]

[illegible] (45) [illegible]

[illegible]

[illegible]

[illegible] (314) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (2005) [illegible]

[illegible]

[illegible]

[illegible] (212) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (Stray, 2007) [illegible]

(1400) [illegible]

[illegible] (%41) [illegible] (%59) [illegible]

[illegible] (%59.4) [illegible]

[illegible] (%40.6) [illegible]

[illegible]

[illegible] (2007) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (116) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (Mellivell, 2007) [illegible]

[illegible] (136) [illegible]

[illegible] (2008) [illegible]

(239) [illegible]

[illegible] (2008) [illegible]

[illegible] (559) [illegible]

[illegible]

[illegible]

[illegible] (Asandului, 2008) [illegible]

[illegible]

[illegible]

[illegible] (50) [illegible]

[illegible] (1898) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (2009) [illegible]

[illegible]

[illegible]

[illegible] (255) [illegible]

[illegible]

[illegible]

[illegible] (Bhatti, 2010) [illegible]

[illegible] (100) [illegible]

[illegible] (%22) [illegible]

[illegible] (2010) [illegible]

[illegible]

[illegible]

[illegible] (40) [illegible] (62) [illegible]

[illegible] (65 [illegible]) [illegible]

[illegible]

[illegible]

[illegible] (Word) [illegible]

[illegible] (PowerPoint) [illegible] (Internet) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (Felck, 2010) [illegible]

[illegible]

[illegible] (36) [illegible]

[illegible] (60) [illegible]

[illegible]

[illegible] (%67) [illegible]

(2011)

(%20) (150)

(Bauder & Emanuel, 2012) (200)

[illegible]

[illegible]

[illegible] (Edwina, 2003) [illegible]

[illegible] (100) [illegible]

[illegible]

[illegible]

[illegible] (Anderson, 2008) [illegible] (1887) [illegible] 2007 [illegible] 2004 [illegible]

[illegible] (2009) [illegible] (248) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] ،2004 [illegible] ،Jankowska, 2004 ،2002 [illegible]) :[illegible]

.(2010 [illegible]

[illegible]

[illegible]

[illegible]

Bauder & ،Asandului, 2008 ،2008 [illegible] ،2005 [illegible] ،2002 [illegible])

.Emanuel, 2012

[illegible]

[illegible]

.(2006 [illegible] ،2006 [illegible] ،Edwina, 2003) :[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (12870) [illegible] 2013 /2012 [illegible]

[illegible] (2013/2012) [illegible]

[illegible]

[illegible]

[illegible] %5 [illegible]

[illegible]

[illegible] (1) [illegible] (644) [illegible]

[illegible]

(1) [illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]
47.0	303	[illegible]	[illegible]
53.0	341	[illegible]	
	644	[illegible]	
45.8	295	[illegible]	[illegible]
54.2	349	[illegible]	
100.0	644	[illegible]	

[illegible]:

[illegible]

[illegible] (67) [illegible]:

[illegible]

[illegible]

- [illegible]
- [illegible]

. ǁĂŵƙ ƗƶďǴƞ Ŏϯ ƘŬǴƮƙŬƒĂ ƘǴďĂǁƶď!ƒ ǴŏƞĂ!ĂǇƗƙ ǊƒƥƤƙƪƒ ǋƞƒĂƙ Ŏƙ!ƒ ƘǴŵĂƶƮ!ƒ -

Ăơǉ!ƒ ǏǁƵĂ ÜŎƪǴďƤ!ƒ ƘƧƗŏ! ΣǴŏǀď! ǼǀϯĂ ƗǉǴŵƙƪŬƒ ƘƒƧǀϯ ǇƵ ƗŵǴƞŰƒ Ǉǅ ǼďǁƵ

:ŎƙŬƒ

ǼƥƞǀƧŏŵƗ	ǀƧŏŵƗ	ƗƱƪĂƙď	ƗϧŏƶƯ	ǼƥƞƗϧŏƶƯ
ƘǴƞƧƥ 5	ƘǴƞƧƥ 4	ƘǴƞƧƥ 3	ƗƞƧƥ 2	ǀƥơƒĂ ƗƞƧƥ

Ǆƙŏƪ Ɨƪƒ ƧƥƒǴ ǴǌŏǪ Ƙǁ ƮĂ Ŏƙ!ƒ ƗŏŵǴƪơ!ƒ ƘǴƱƪĂƙď!ƒ Ǆŏƥ ǇƷϯ ǁ!Ʀ Ǐ!ǫ ǼƥǴǉƙƪƒĂ

:ƧǴŏƶď!ƒ ǏǁƵ ǼƥǴďƙƵƒ ÜŎ!Ǵƙ!ƒ Ăơǉ!ƒ ǏǁƵ ƘǴǉǴŏŵ!ƒ Ƨŏƪϧƙ! ǴǌƶďýďǴƶƙƒ

$$1.33 = \frac{1 - 5}{3} = \frac{\text{Ǐǉƥ}Ǖ\text{ƒ ƥơ!ƒ Ǉ Ǐǁ}Ƶ\text{Ǖƒ ƥơ!ƒ}}{3}$$

Ư ϧƤǉď	ƱƪĂƙď	ƴϧƙƧď
233 -1	234-365	3.66 -5

ǇĂƗŏ (3.66 -5) Ǉŏŵ ƘƒƧǀϧǁ! ŎŵǴƪơ!ƒ ƱƪĂƙď!ƒ Ɨďŏƥ ƘǉǴƗ ƒƦϯ ǁ!Ʀ ǏǁƵ ǄǴǉŵĂ

ƒƦǫ ǴďǅÜǀƧǀϧ!ƒ ǏǁƵ ƴďƙƞď!ƒ ƥƒƧǅƗǀϯƒĂď Ŏǉƶŏ ƒƦǋĂ ÜǼƶϧƙƧď ǇŏƗƧǴƬď!ƒ ƘƒƧĂƮƙ ăĂƙƪď

ÜǼƱƪĂƙď ƘƒƧĂƮƙ!ƒ ăĂƙƪď Ǉϯϯ (234-365) ĭĂǴƪŏ Ăǅ ƧŵƗǅ ŎŵǴƪơ!ƒ ƱƪĂƙď!ƒ Ɨďŏƥ ƘǉǴƗ

.ǼƯϧƤǉď ƘƒƧĂƮƙ!ƒ ăĂƙƪď ǇĂƗŏϯ (233 -1) Ǉď ŎŵǴƪơ!ƒ ƱƪĂƙď!ƒ ǇǴƗ ƒƦǫĂ

(2) üŇjǫlШ

ƒƵǁǀ ǑƑĠǆŇjƥl Ǐǂƣlǀǫǁǀ ƼƒƨłǗǀ üĎǈƒyĎǆ

ƘǕĠƞǆ!ƒ	ǑǁƤƒƥ!ƒ ƪĠƪƙǕƒ
ƧƼƒĂƙ!ƒ	0.97
ĎƒƥƤƙƪǕƒ	0.96
ƘĠƕĂƺƮ!ƒ	0.92
0.95	Ǒǁǂ!ƒ ƪĠƪƙǕƒ

ƸǁƕƥpĂ Üłƪƒ Ƨƥ!ƒ ƘĠǒĠƺ! ł!ĂƕlǆƘĠƕƛ!ƒ Ƙǖǆĝƶǆ ĎǒpǇĎ ƪƕĠƪ!ƒ ýĂƥƞ!ƒ ǇǆǇǒƕƙǒ .(0.95) Ǒǁǂ!ƒ Ʊƪ Ăƙǆ!ƒ

:ƕƨǀƥǫǁǀ lǀƥǐƸłĎǆ

:ƕǂƪłƨĎǁǀ lǀƥǐƸłĎǁǀ :ǗŇjǒ

1- Ʃǈƞ!ƒ : ƧǂƦ - ǏƛǈĎ.

2- łǒǁǂ!ƒ : łǒǈĠƪǈǫ - łǒǆǁƵ.

:ƒǐǆƒƙ lǀƥǐƸłĎǁǀ ƕyǦƒłǁǀ

yƥƒĂ ĎƒƥƤƙƒ ƘƒĂƥĎ ĠǒƞĂ!Ăǈǂƙ ƘĠǆĂǁƶǆ!ƒ ƘǕĠƮƙǕƒĂ ƘǕĠƮƥơ!ƒ łƛǒƼ Ǒƞĝǆƶł Ăƙƕ ǁǆ ǇǆŇjƞĂ łŇjƞ ǇǈƧ

łƕǁƱ!ƒ

:ƕƨǀƥǫǁǀ lǀƥƀƥШ

- ƘĂƮơ!ƒ ýĂƵǁ ǏǁƵƺĂǆ ł!ĂƼƒĂǆ ǏǁƵ Ǝǁǂ!ƒ łǒǁǂĂ ƘĠƪƒƧƥ!ƒ ĠǒǁƵ!ƒ ƳĂƧƬǆ ƪƧ!ƒ łƪ!ƃ.

- ƞǆy ĂƮǒƸł ƕǕƥ ƔƧǈǇ!ƒ ǐ ĂƒƧƥ!ƒ ƘĠƪ!ƕ ł!ƕ.

- ƕǇĠǒ lƒƥǀ łƪƒƧƥ!ƒ Ăƙơlƪ ǆĝƪƬƒƘ Ʈƥjǈƞ ĂƕƙƪǈĠ.

- [illegible]

- [illegible]

- [illegible]

- [illegible] SPPS.

- [illegible]

- [illegible]

[illegible]:

[illegible] (SPPS) [illegible]:

1. [illegible]
2. [illegible]
3. [illegible]

ÙĜƐþǁǁ üƬƨǁǁ

ƕƨƐþƣǁǁ ƛƍƑŧǆ

Ĭ!ǫ Ƙ5þǋ Ǒǩ!ƒĂ ÜǴǌǩǁƑʅǅ ƇĂƣ Ǒ5 ŧʅƒƨþ!ƒ ǋƑǴǩǉ! ǜǸƮ5ǆ Ǵ ƣƨƵ ýƮ5!ƒ ƒǋ ǇǆƣǨǒ

ǁĂƕǩ ŧƶǆǴƞ Ǒ5 ŧƛǒþƠ!ƒ ƘǓǴƮǩǓƒĂ ƘǴǆĂǁƶǆ!ƒ ǴǒƞĂ!Ăǉŧǩ ƘƒĂþǅ ǅƒþƤǩʅƒ ƴþƒĂ ǇƵ ƧƬŧ!ƒ

:ǑǩǓƒ ĂƠǉ!ƒ Ĭ ǁƵ ŧʅƒƨþ!ƒ ŧǁƑʅǅ Ɣʅƣ ǋƑǴǩǉ!ƒ ƧǒǉƮǩ ǅǩ þǀ!Ă Û ŧǁƱ!ƒ ƨÜǉ ŧǌƞĂ ǇǆƎ

ƕƴǅǅƑƜ Ĭʒ ƔþʒƐǋŧǅǁǁ ʅǗƑƬŧǗƐǋ ʅƑǅǋŧƴǅǁǁ ƑǐƜǋǁǋǆʅŧ ʅƐǋǫƈ þʒƐǋŧ ƕƜþǫ Ƒǅ" :üǋǓƐ üƐǅƨǁǁ

."ÝƕǴŧƯǁǁ þƣǆ ƕǋƜǋ ǅǅ ƿǋǴŧ.

ŧǒƨǴǒƶǆ!ƒ ƘǴ5ƒƨƠǉǓƒĂ ŧǒƕǴʅƠ!ƒ ƘǴƱʅĂǩǆ!ƒ ƜƒƨƤǩʅƒ ǅǩ ýƒƋʅ!ƒ ƒǋ ǇƵ ŧƕǴƞǘ!

ǴǒƞĂ!Ăǉŧǩ ƘƒĂþǅ ƨ5ƒĂǩ ŧƞƨþ" ýǴƞǆ Ƙƒƨǀ5 ýǒǆƞ ǇƵ ŧʅƒƨþ!ƒ ŧǉǒƵ þƒƨ5ǅ ƘǴƕǴƞǗ

.ǁ!Ʀ ƠƣĂǒ (3) ýĂþƞ!ƒĂ Üýŧŧ ýǴƞǆ!ƒĂ "ǁĂƕǩ ŧƶǆǴƞ Ǒ5 ŧƛǒþƠ!ƒ ƘǓǴƮǩǓƒĂ ƘǴǆĂǁƶǆ!ƒ

(**3**) üǋǫƜ

ƑǐƜǋǁǋǆʅŧ ʅƐǋǫƈ þʒƐǋŧ ƕƜþǫ" ǅǅƳ ƕƨƐþǫǁǁ ƕǆǐƳ ǫƐþʒƈ ʅƐþǐǫʂǁǁ ƕǐþƑǐƴǅǁǁ ʅƑʒƐþƟǆÚƐǋ ƕǐǴƑƨƟǁǁ ʅƑƯƨǋŧǅǁǁ

(**644**=ǅǆ) üǁǁ üƑƜǅǁƐǋ ƑǐǁƦƑǆŧ ƕǴŧþǅ "ƿǋǴŧ ƕƴǅǅƑƜ Ĭʒ ƕǩǐǫƟǁǁ ʅǗƑƬŧǗƐǋ ʅƑǅǋŧƴǅǁǁ

ǌǋŧƨǅǁǁ	ƩƐþƟǆÚƐ ăþƑǐƴǅǁǁ	ƯƨǋŧǅǁǁƐ ĬǴƑƨƟǁǁ	ʅƐþʂƨǁǁ	!5þǁǁ	ƕǴŧþǁǁ
ŧƶ5ǩƨǆ	0.99	3.70	ƘǴǉǴǒƕ!ƒ ƯƨƵ ʅƨǌƞǅ ŧƶǆǴƞ!ƒ ƨ5Ăǩ ŧǒʅǒƨþǩ!ƒ ƘǴƵǴǀ!ƒ Ǒ5 (DATASHOW)	1	1
ŧƱʅĂǩǆ	0.98	3.47	ƘǴǒǀŧ!ƒ ŧ5Ǵŧ Ǒ5 ƔĂʅǴƠ ʅƨǌƞǅ ŧƶǆǴƞ!ƒ ƨ5Ăǩ	9	2
ŧƱʅĂǩǆ	1.00	3.42	ǑǉĂƨǩŧ!Ǔƒ þǒƨƕ!ƒ ŧǆþƤ ŧƶǆǴƞ!ƒ Ǒ5 ƨ5Ăǒ ŧƶǆǴƞ!Ǵ ƒ ǴƤ!ƒ	13	3
ŧƱʅĂǩǆ	0.96	3.41	ƘǴƵǴǀ!ƒ Ǒ5 ŧǒǉĂƨǩŧ!ƒ ʅƨĂƕʅ ŧƶǆǴƞ!ƒ ƨ5Ăǩ ŧǒʅǒƨþǩ!ƒ	3	4
ŧƱʅĂǩǆ	1.03	3.41	ƘǉƨǩǉǓƒ ŧŧƕƬ ĬǁƵ ŧƠƕ!ƒ ŧǆþƤ ŧƶǆǴƞ!ƒ ƨ5Ăǩ	12	4

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	0.95	3.39	[illegible]	23	6
[illegible]	1.08	3.39	[illegible]	30	6
[illegible]	1.04	3.36	[illegible]	8	8
[illegible]	1.06	3.35	[illegible]	11	9
[illegible]	0.95	3.34	[illegible]	4	10
[illegible]	1.06	3.34	[illegible]	16	10
[illegible]	1.18	3.34	[illegible]	19	10
[illegible]	0.95	3.34	[illegible]	22	10
[illegible]	1.02	3.34	[illegible]	28	10
[illegible]	1.09	3.33	[illegible]	15	15
[illegible]	1.03	3.32	[illegible]	21	16
[illegible]	1.00	3.32	[illegible]	26	16
[illegible]	1.05	3.32	[illegible]	29	16
[illegible]	1.04	3.31	[illegible]	27	19
[illegible]	1.07	3.30	[illegible] (LMS LCMS) [illegible]	18	20
[illegible]	1.03	3.29	[illegible]	7	21
[illegible]	1.13	3.29	[illegible]	14	21

njNjǂ ƨ DŽlƐ	ƹ ƐþƟǅǗƐ ăþƑĭýDŽlƐ	Ư ƨ NjǂDŽlƐ Ĭ ǴƑ ƨ ƟlƐ	l Ɛþƨ2lƐ	!5þlƐ	hǴǂþlƐ
ǂƱƪĂkdž	0.98	3.29	ǂŏǉĂƧkǂ!ƒ Σ ŏƧþk ƘǴƵǴp ǂƶdžǴƞ!ƒ Ƨ5Ăk	24	21
ǂƱƪĂkdž	1.09	3.28	lþǴdž ý ǂ! ŎǉĂƧkǂ!ƒ ƧƧldž ǂƶdžǴƞ!ƒ Ƨ5Ăk	17	24
ǂƱƪĂkdž	1.12	3.27	LJǂdžŏ ǂŏǉĂŏƨ5lk lƧƑƒþ ǂƶdžǴƞ!ƒ Ŏ5 Ƨ5Ăkŏ þƶh LJƵ DŽlƶk!ƒ Ŏ5 ǴnjdžƒþƤkƪƒ	10	25
ǂƱƪĂkdž	1.08	3.26	ƾŏƧƱ LJƵ þƶh LJƵ DŽlƶk!ƒ ǂŏǉǴǂdžǫ ǂƶdžǴƞ!ƒ Ƨ5Ăk lƨ5lkdž!ƒ Σ ĂƧþ!ƒ	20	26
ǂƱƪĂkdž	1.06	3.26	Ɣkǂh ǂŏǉƹ ǂŏǉĂƧkǂ!ƒ ǂhkǂdž ǂƶdžǴƞ!ƒ Ŏ5 Ƨ5Ăkŏ Σ ŏƧþk!ƒ ǂŏldžƵ DŽþƤk ǂŏǉĂƧkǂ!ƒ	25	26
ǂƱƪĂkdž	1.06	3.23	LJƵ Ăŏþŏ5!ƒ ƘƒƧdžkƋdž þlƵ ǂŏǉǴǂdžǫ ǂƶdžǴƞ!ƒ Ƨ5Ăk þƶh	5	28
ǂƱƪĂkdž	1.13	3.12	ƘƒĂǉl!ƒ DŽƒþƤkƪǴh DŽlƶk!ƒ ǂŏǉǴǂdžǫ ǂƶdžǴƞ!ƒ Ƨ5Ăk ǂŏdžŏlƶk!ƒ ǂŏƑǴ ư 5!ƒ	6	29
ǂƱƪĂkdž	1.01	3.08	ǂhlƱl! ǂŏdžŏlƶk ƔƑǴlơ ǂƶdžǴƞ!ƒ Ƨ5Ăk	2	30
ǂƱƪĂkdž	0.82	3.33	ül l hkĭǫƟlƐ l ǗƑƬǂǗƐNj l ƑDŽNjǂýDŽlƐ ƒĭƜNjlNjǂlǂ l ƐNjǫǭ þƺƐNjǂ /üƑƜDŽ		

ƘǴdžĂlƶdž!ƒ ǴŏƞĂ!Ăǉǂk ƘƒĂþD Ƨ5ƒĂk ýǴƞdž! ŎhǴƪơ!ƒ ƱƪĂkdž!ƒ LJD (3) ýĂþƞ!ƒ LJŏhŏ

lƨnjƞD ǂƶdžǴƞ!ƒ Ƨ5Ăk"ĬlƵ ƒ ǉk Ŏk!ƒĂ (1) DžpƧ lƧl5!ƒ ƘƇƞ Ă Ü(3.33) ƹlh ƘŬǴƬkŬƒĂ

ƱƪĂkdžh Ĭ!ĂŪƒ ǂhkƧdž!ƒ Ŏ5 "ǂŏƪŏƧþk!ƒ ƘǴƵǴl!ƒ Ŏ5 (DATASHOW) ƘǴǉǴŏh!ƒ ƯƧƵ

lƨnjƞD ǂƶdžǴƞ!ƒ Ƨ5Ăk" ǴnjƬǉĂ (9) DžpƧ lƧl5!ƒ ǂŏǉǴĂ!ƒ ǂhkƧdž!ƒ Ŏ5 ǴNjŭk Ü(3.70) ŎhǴƪơ

ǴnjƬǉĂ (2) DžpƧ lƧl5!ƒ ƘƇƞ Ǵdžǉŏh Ü(3.47) ŎhǴƪơ ƱƪĂkdžh "ƘǴŏlǂ!ƒ ǂ5Ǵǂ Ŏ5 ƔĂƪǴơ

.(3.08) ŎhǴƪơ ƱƪĂkdžhĂ lƧŏƤŪƒ ǂhkƧdž!Ǵh "ǂhlƱl! ǂŏdžŏlƶk ƔƑǴlơ ǂƶdžǴƞ!ƒ Ƨ5Ăk"

[illegible] :

[illegible]

[illegible] (4) [illegible]

(4) [illegible]

[illegible] (**644**=[illegible])

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	0.99	3.53	[illegible]	51	1
[illegible]	0.94	3.51	[illegible]	47	2
[illegible]	1.10	3.49	[illegible]	31	3
[illegible]	0.94	3.44	[illegible] (POWER POINT) [illegible]	32	4
[illegible]	0.91	3.42	[illegible]	48	5
[illegible]	0.96	3.42	[illegible]	49	5
[illegible]	1.01	3.39	[illegible]	41	7
[illegible]	1.04	3.37	[illegible]	42	8
[illegible]	1.00	3.36	[illegible] (WORD)	34	9
[illegible]	1.03	3.36	(DATA SHOW) [illegible]	35	9

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	0.98	3.34	[illegible]	37	11
[illegible]	1.05	3.30	[illegible] (EXCEL)	33	12
[illegible]	1.04	3.30	[illegible]	39	12
[illegible]	1.08	3.29	[illegible]	46	14
[illegible]	1.04	3.29	[illegible]	52	14
[illegible]	1.05	3.28	[illegible]	43	16
[illegible]	1.04	3.28	[illegible]	50	16
[illegible]	1.07	3.26	[illegible]	36	18
[illegible]	1.06	3.25	[illegible]	38	19
[illegible]	1.11	3.24	[illegible]	40	20
[illegible]	1.09	3.23	[illegible]	45	21
[illegible]	1.08	3.20	[illegible]	44	22
[illegible]	0.80	3.34	[illegible]		

[illegible] (4) [illegible] (3.34) [illegible] (51) [illegible]

[illegible] (47) [illegible] (3.53) [illegible]

[illegible] (44) [illegible] (3.51)

[illegible] (3.20).

[illegible]

[illegible] (5) [illegible].

(5) [illegible]

[illegible]

(644=[illegible]) [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	0.94	3.37	[illegible]	66	1
[illegible]	0.91	3.32	[illegible]	61	2
[illegible]	0.93	3.32	[illegible]	67	2
[illegible]	0.83	3.3	[illegible]	53	4
[illegible]	0.9	3.3	[illegible]	65	4
[illegible]	0.9	3.29	[illegible]	59	6
[illegible]	0.85	3.29	[illegible]	60	6
[illegible]	0.88	3.28	[illegible]	62	8
[illegible]	0.86	3.28	[illegible]	64	8
[illegible]	0.88	3.27	[illegible]	58	10
[illegible]	0.77	3.26	[illegible]	54	11
[illegible]	0.82	3.26	[illegible]	56	11
[illegible]	0.86	3.26	[illegible]	57	11
[illegible]	0.82	3.25	[illegible]	55	14

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	0.88	3.25	[illegible]	63	14
[illegible]	0.61	3.29	[illegible]		

[illegible] (5) [illegible] (3.29) [illegible] (66) [illegible] (3.37) [illegible] (61) [illegible] (63 [illegible] 55) [illegible] (3.32) [illegible] (3.25).

ƕǀǚĭƳ ǫǫƀʓƈ ǀ ƐƀǐǭȿǂƗ ƊǏĭƓ (α ≤ 0.05) ƕĭƏƑȚƟƋ ƕǁǁǕǭ ǀ ƐƤ ƼǋƀƷ ǷƑǚǀǰ üǀǰ" :ƱƓƐƀǁǁ üƐƊƨǁƐ

ǀ ƐƀĭƩƗƊǍǁ ǌǰȒƴƗ ǕƕƙĭǭƟǁƐ ǀ ǗƑȚƗǗƐǋ ǀ ƑƊǋƗƴƊǍǁƐ ƑĭǕǌǁǌǚǀƗ ǀ Ɛǋǭƈ !ƐǭƜƗƨƐ ƱƷƐǋǁ ƕƨƐƀǭǁƐ

."ƳƕĭƗǀǁƐǋ ƧǚǕǁƐ :ƕƨƐƀǭǁƐ

ƗŏƧƇŏǅǚ!ƒ ƘƓǃƒƧơǀǕƒǍ ƗŏƕƓǀơ!ƒ ƘƇƱǀǍƙǚ!ƒ ǕƒƧƤƙǀƒ Ɗƙ ýƒƋǀ!ƒ ƒƦǋ ǇƵ ƗƕƓƞǘ!

ƓŏƞǍ!ǍǀƗƙ ƘƒǍƀƊ ƊƒƀƤƙǀƒ ƴƀƒǍ" ƗǀƒƧƀ!ƒ ǀƒƀƒ ƘǕƓƞǚ ǇƵ ƗǀƒƧƀ!ƒ ƗǀöƵ ƀƒƧƊ ƘƓƕƓƞǕ

(6) ýǍƀƞ!ƒǍ Ü(ƗöǀƗ!ƒǍ ÜƩǀƞ!ƒ) ĭƧŏƷƙǚ! ǗƶƕƙýƗƗ ǀƒƀǕƒǍ "ƗƛƀơƆ!ƒ ƘǕƓƮƙǕƒǍ ƘƓǚǍǀǅǚ!ƒ

. ǀ !ƦƦ ǇǑƕǑ

(6) !ƼƀüǋǭǕ

ǀ ƐǋǭƈǀƐǭƜƗƨƐ ƱƷƐǋ ƕƨƐƀǭǁƐ ƳƐǭƐ ǀ ǗƑǕǕƊ ƊƳ ƕƨƐƀǭǁƐ ƕǚĭƳ ǫǫƀʓƈ ǀ ƐƀǐǭȿǁƗ ƕĭƀƑĭƳƊǍǁƐ ǀ ƑʓƀƟǚǗƐǋ ƕĭƓƑƨƟǁƐ ǀ ƑƠƨǋƗƊǍǁƐ
ǀ ƐǋǭƈǀƐǭƜƗƨƐ ƱƷƐǋ ǀ ƑƊǋƗƴƊǍǁƐ ƑĭǕǌǁǌǚǀƗ ǀ ǗƑȚƗǗƐǋ ǀ ƑƊǋƗƴƊǍǁƐ ƑĭǕǌǁǌǚǀƗ (**644**=ƊǏ) ƕĭƗǀǁƐǋ ǕƧǚǕǁƐ ǍƀĭƩƗƊǏ ƑƳƓƗ ƕƙĭǭƟǁƐ

üǀǀ ƳƐǭǕƐ		ǇǕƐǋƗ ĭƗǀƐ ǀ ƑƓǋƳȚ ƑĭǕǌǁǌǚǀƗ ǀ ƐǋǭƈǀƐǭƜƗƨƐ ǀ ǗƑȚƗǗƐǋ ǀ ƑƊǋƗƴƊǍǁƐ ƕƊǏǭƜƗƨƊǍǁƐ ƕƙĭǭƟǁƐ		ƑĭǕǌǁǌǚǀƗ ǀ ƐǋǭƈǀƐǭƜƗƨƐ ǀ ƑƊǋƗƴƊǍǁƐ ƕƙĭǭƟǁƐ ǀ ǗƑȚƗǗƐǋ ƕƊǏǭƜƗƨƊǍǁƐ		ǀ ƐǋǭƈǀƐ ƀʓƐǋƗ ǀ ƑƊǋƗƴƊǍǁƐ ƑĭǕǌǁǌǚǀƗ ƕƙĭǭƟǁƐ ǀ ǗƑȚƗǗƐǋ		ǫǫƳǁƐ	ƕĭƗǀǁƐ	ƧǚǕǁƐ
ǍƀĭƳƊǍǁƐ ƩƐƀƟǚǕƐ	ǏƓƑƨƟǁƐ ƱƨǋƗƊǍǁƐ	ǍƀĭƳƊǍǁƐ ƩƐƀƟǚǕƐ	ǏƓƑƨƟǁƐ ƱƨǋƗƊǍǁƐ	ǍƀĭƳƊǍǁƐ ƩƐƀƟǚǕƐ	ǏƓƑƨƟǁƐ ƱƨǋƗƊǍǁƐ	ǍƀĭƳƊǍǁƐ ƩƐƀƟǚǕƐ	ǏƓƑƨƟǁƐ ƱƨǋƗƊǍǁƐ			
0.85	3.07	0.72	3.01	1.03	3.11	1.07	3.06	156	ƗöǚǀƵ	ƧƗƦ
0.88	2.91	0.78	3.01	1.06	2.89	1.03	2.87	147	ƗöǀƓǀǀǀ	
0.87	2.99	0.75	3.01	1.05	3.00	1.06	2.97	303	ǍǚƞǚƗ! Ƴ	
0.17	3.58	0.27	3.56	0.23	3.58	0.20	3.60	139	ƗöǚǀƵ	ĭƛǀƊ
0.18	3.65	0.30	3.51	0.25	3.69	0.23	3.68	202	ƗöǀƓǀǀǀ	
0.18	3.62	0.29	3.53	0.25	3.64	0.22	3.65	341	ǍǚƞǚƗ! Ƴ	
0.68	3.31	0.62	3.27	0.80	3.33	0.84	3.32	295	ƗöǚǀƵ	ƳǍǚƞǚƗ!
0.69	3.33	0.61	3.30	0.81	3.35	0.80	3.34	349	ƗöǀƓǀǀǀ	

[illegible] (6) [illegible] / [illegible] (MNOVA) [illegible] (2 way ANOVA) [illegible] (8-7) [illegible].

(7) [illegible]

(644=[illegible]) [illegible] (MNOVA) [illegible]

[illegible]	F	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
0.00	135.04	74.55	1	74.55	[illegible]	[illegible]
0.00	119.93	65.60	1	65.60	[illegible]	
0.00	141.77	43.68	1	43.68	[illegible]	
0.39	0.73	0.40	1	0.40	[illegible]	[illegible]
0.41	0.67	0.37	1	0.37	[illegible]	
0.53	0.40	0.12	1	0.12	[illegible]	
		0.55	641	353.85	[illegible]	[illegible]
		0.55	641	350.61	[illegible]	
		0.31	641	197.51	[illegible]	
			644	7561.39	[illegible]	[illegible]
			644	7611.68	[illegible]	
			644	7196.96	[illegible]	

[illegible]	F	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
					[illegible]	
			643	428.49	[illegible]	
			643	416.27	[illegible]	[illegible]
			643	241.33	[illegible]	

:[illegible] (7) [illegible]

1- [illegible] (F) [illegible] "[illegible]" [illegible] (135.04) [illegible] $(\alpha \leq 0.05)$ [illegible] " [illegible] "[illegible]" [illegible] (7) [illegible] (3.65) [illegible] (2.97).

1- [illegible] (F) [illegible] " [illegible] " [illegible] (119.93) [illegible] $(\alpha \leq 0.05)$، [illegible] " [illegible] "[illegible]" [illegible] (7) [illegible] (3.64) [illegible] (3.00).

2- [illegible] (F) [illegible] (141.77) [illegible] (α ≤ 0.05) [illegible] (3.53) [illegible] (7) [illegible] (3.01).

3- [illegible] (0.05= α) [illegible] (F) [illegible].

(8) [illegible]

[illegible] (2 way ANOVA) [illegible]

[illegible]	F	[illegible]	[illegible]	[illegible]	[illegible]
0.00	172.42	64.08	1	64.08	[illegible]
0.36	0.85	0.32	1	0.32	[illegible]
		0.37	641	238.24	[illegible]
			644	7415.88	[illegible]
			643	302.41	[illegible]

:ŎķŬƒ (8)ýĂþŋ!ƒ ǇĴǆ ǇĴōħķō

ƘŬĠŢķŬƒĂ ƘĠǆĂžǆ!ƒ ĠōŋĂ!ĂǇŧķ ƘƒĂþĐ ǅƒþƤķƪƒ ƴþƒĂ /ý‡‡ ǀƒþǖ! (F) Ɨǆōp Ƙʒħ -1

α) Ɨ!Ŭþ!ƒ ăĂķƪǆ þǇƵ ĞōƑĠŢơƍ Ɨ!ƒþ Ɨǆōp ŎǋĂ (172.42) ΣǇŋ!ƒ Ƨōʒǆ! ĞƶħƘ Ɨƛōþơ!ƒ

ƗǇōƵ þƒƧƼ ƘĠħĠŋķƪƒ ǇĴōħ ƗōƑĠŢơƍ Ɨ!Ŭþ ƘƒƦ ƾĂƧƼ þĂŋĂ ĬĨƵ ýþō ƒƦǋĂ Ü(0.05=

ƘŬĠŢķŬƒĂ ƘĠǆĂžǆ!ƒ ĠōŋĂ!ĂǇŧķ ƘƒĂþĐ ǅƒþƤķƪƒ ƴþƒĂ / ý‡‡ ǀƒþǕƒ ǇƵ Ɨƪƒƨþ!ƒ

Ɨ ĠǇŬƒ Ơ!ĠŢ! ƾĂƧƽ!ƒ ǇĐ ǇĴōħķō (7) ýĂþŋ Ĭ!ƍ ƳĂŋƧ!ĠħĂ ÜΣǇŋ!ƒ Ƨōʒǆ! ĞƶħƘ Ɨƛōþơ!ƒ

.(2.99) ƧĂ‡Ʀ! ŎħĠƪơ!ƒ Ʊƪĭǆ!ƒ Ʃħ ĠǆǇōħ Ü(3.62) ŎħĠƪơ Ʊƪĭǆħ

ƘŬĠŢķŬƒĂ ƘĠǆĂžǆ!ƒ ĠōŋĂ!ĂǇŧķ ƘƒĂþĐ ǅƒþƤķƪƒ ƴþƒĂ /ý‡‡ ǀƒþǖ! (F) Ɨǆōp Ƙʒħ -2

α) Ɨ!Ŭþ!ƒ ăĂķƪǆ þǇƵ ĞōƑĠŢơƍ Ɨ!ƒþ Ɨǆōp ŎǋĂ Ɨō‡!ƒ Ƨōʒǆ! ĞƶħƘ (0.85) Ɨƛōþơ!ƒ

ƗǇōƵ þƒƧƼ ƘĠħĠŋķƪƒ ǇĴōħ ƗōƑĠŢơƍ Ɨ!Ŭþ ƘƒƦ ƾĂƧƼ þĂŋĂ ĬĨƵ ýþō ƒƦǋĂ Ü(0.05=

ƘŬĠŢķŬƒĂ ƘĠǆĂžǆ!ƒ ĠōŋĂ!ĂǇŧķ ƘƒĂþĐ ǅƒþƤķƪƒ ƴþƒĂ / ý‡‡ ǀƒþǕƒ ǇƵ Ɨƪƒƨþ!ƒ

.Ɨō‡!ƒ Ƨōʒǆ! ĞƶħƘ Ɨƛōþơ!ƒ

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (DATASHOW) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (Jankowska, 2004) [illegible]

[illegible] (2010) [illegible]

(2002)

(2004)

(51) (3.34)

(47) (3.53)

(44) (3.51)

.(3.20)

- .ŎǀjĂSƘǂ!Ǔƒ þǒSƾ!ƒ ýǚP LJdž ǂhǜƱ!ƒ ydž ýƮƒĂƘ!Ƕƾ ƩǒSþƘ!ƒ ǂƑǒNj Ăƣ Ƶ ǅĂlǒ
- .(POWER POINT) ǋdžǀjSƾ ǅƒþƤƘƪǶƾ ǂǒdžǒþlƘ ƯĂSƵ ƩǒSþƘ!ƒ ǂƑǒNj Ăƣ Ƶ ǅþlǒ
- .ƘƒSƣǴơdž!ƒ Ŏ5 ǂǒdžǒǜƶƘ!ƒ ýƑǴƪĂ!ƒ ƩǒSþƘ!ƒ ǂƑǒNj ǴƣƵ ǅþƤƘƪǒ
- .ǂhǜƱ!ƒĂ ƩǒSþƘ!ƒ ǂƑǒNj ǴƣƵ ýhp LJdž ýƵǴ5 ýǂTƾ ǂǒhĂƪǴơ!ƒ ƘƒShƘƤdž!ƒ ǅþƤƘƪƘ
- .ǂǒƛơƾ!ƒ ǂǒǀjĂSƘǂ!Ǔƒ yþƒĂdž!ƒ Ŏ5 ǂơƾ!ƒ ǏǜƵ ǂhǜƱ!ƒ ƩǒSþƘ!ƒ ǂƑǒNj ǴƣƵ ǂơǒ
- ǂǂhT ǏǜƵ ǂǒǀjĂSƘǂ!Ǔƒ ƔƘǂ!ƒ ǅƒþƤƘƪƒ Ǐ!ǒ ǂhǜƱ!ƒ ƩǒSþƘ!ƒ ǂƑǒNj ǴƣƵ ǋƞĂǒ .ƘǀjSƘǀjǓƒ
- .(WORD) ǋdžǀjSƾ ǏǜƵ ǂƵĂhƱdž ǅǌƘǴƞƒĂ ǂhǜƱ!ƒ ǅþlǒ
- .ƘƒSƣǴơdž!ƒ Ŏ5 (DATA SHOW) ĂTǴƘƒþ ƨǴnjƞ ǅƒþƤƘƪƒ ǅƘǒ
- .ƘƒSƣǴơdž!ƒ Ŏ5 ǅǒǜƶƘ!ƒ ƘǴǒǀjlƘĂ ƘƒĂþǅĂ ýƑǴƪĂ LJdž ƩǒSþƘ!ƒ ǂƑǒNj ǴƣƵ ƳĂǀjǒ
- .(EXCEL) ýƪǂƒ ǋdžǀjSƾ ǅƒþƤƘƪǶƾ ƘǴǀjǴǒƾ!ƒ ǂhǜƱ!ƒ ýǜơǒ
- .ǂhǜƱ!ƒ ƭǒĂTƘĂ ƘƒSƣǴơdž!ƒ ǴƒSƛǫ Ŏ5 lþþƶƘdž!ƒ ýƑǴƪĂ!ƒ ǅþƤƘƪƘ
- ƯSƶ! ƘƒSƣǴơdž!ƒ Ŏ5 ǂǒƘĂƮ!ƒ ýǒƞƪƘ!ƒ lƨnjƞǅ ƩǒSþƘ!ƒ ǂƑǒNj ǴƣƵ ǅþƤƘƪǒ .ƘǚǒƞƪƘ!ƒĂ ƘǚhǴldž!ƒ
- .ǂhǜƱ!ƒ ǅǒǜƶƘĂ ǅǜƶƘ Ŏ5 ǂǒĂƷǜ!ƒ ƘƒShƘƤdž!ƒ ǅþƤƘƪƘ
- .ǂhǜƱ!ƒ ýhp LJdž ǂǒƪǒSþƘ!ƒ ƘǴƵǴl!ƒ Ŏ5 ƔĂƪǴơ!ƒ ǅþƤƘƪǒ
- .ǂƶdžǴƞ!ƒ Ŏ5 ǂǒǀjĂSƘǂ!Ǔƒ ƘƒSǴhƘƤǓƒ ǅǴƱǀj ǅþƤƘƪǒ
- .ǂǒƪƒSþ!ƒ þƒĂdž!ƒ LJdž þǒþƶ!ƒ ǴƒSƛǫ Ŏ5 ǂǒdžǒǜƶƘ!ƒ ƔƑǴlơ!ƒ ǅþƤƘƪƘ
- .ƘƒSƣǴơdž!Ƕƾ ýƵǴ5 ýǂTƾ ǂǒǀjĂSƘǂ!Ǔƒ lSĂƾƪ!ƒ ǅþƤƘƪƘ

- [illegible]
- [illegible]
- [illegible]

[illegible]

(1 [illegible]

(2 [illegible]

(3 [illegible]

[illegible] (2010) [illegible]

[illegible]

[illegible] (2011) [illegible]

[illegible] (2010) [illegible]

[illegible]

[illegible] (2010) [illegible]

[illegible] (Internet) [illegible] (Word) [illegible]

.(PowerPoint) [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] (3.29) [illegible]

[illegible] (66) [illegible]

[illegible] (3.37) [illegible]

[illegible] (61) [illegible]

[illegible] (63 [illegible] 55) [illegible] (3.32) [illegible]

.(3.25)

(2010)

(0.05= α)

ƘƓōǋďžƵ Ŏ5 Ŧŏƥŋ ƧƛǂƊ ŧƓǉŰƒ ǇƊ Ŏ5 ǇďžǂƘ ŧƓǉŰƒ Ơ!ƓƮ! ŦŏǂƓƮơƍ ƨĂƧ5 ƥĂŋĂ Ƨŏƪƽk ǇƊ

ǄƥƶǃŦƕƪǉ!ƓƕĂ ÜƧĂǂƦ!ƒ ǇƵ ǴďžƓďžƙ ƻǋƙƤŏ ǇǋƧŏƥƖƙ ǇƓǂ ƒƦ! ÜƧĂǂƦ!ƒ Ǉďž ǴďžƒƨƘ!ƒ ƧƛǂƊĂ ǄǋƶƘ!ƒ

ƻĂƧƲ!ƒ ǇnjŏƼ ǊƕƓƬƘƘ ǇŏƙŏǋǂǃƒǗ ǂ5 ŦŏǋǂǃƒƧŏƺƙďž! ăƨƶƙ ŦŏǂƓƮơƍ Ŧ!Ǜƥ ƘƒƦ ƨĂƧ5 ƥĂŋĂ

ƘƓōǋďžƵ Ŏ5 ƓnjďžƒƥƤƙƪƒĂ ŦƛŏƥƠ!ƒ ƘǛƓƮƙǛƒĂ ƘƓďžĂǋƶďž!ƒ ƓŏŋĂ!ĂǉǂƘ ƘƒĂƥƕ ŦǀǋƶƘďž!ƒ ŦŏďžŏǋƶƘ!ƒ

.ŦŏǉƓƪǉŰƒĂ Ŧŏďžǋƶ!ƒ ƘƓōǋǂ!ƒ Ŏ5 ŦƕǋƱ!ƒ ƧƲǉ ŦnjŋĂ Ǉďž ƨĂƧƽ!ƒ ƧnjƲƙ Ǆ! ƒƦ! ÜŦƕǋƱ!ƒ ǄŏǋƶƙĂ Ǆǋƶƙ

: l ƒĩƮNjǂǁɛ

:ŎƙŬƓƀ ŎƮĂƙ ƓnjǇϧ5 ƝƑƓƙǇ ǇǆǏ ǂƪƒƨƥ!ƒ ƝŏƦ ƘǁƮĂƙ ƓǏ ƇĂư Ŏ5

- ƥŏĂƨƙ! ǂŏɳŏƙƒƨƙƪƦ ǂƱƤ ŎǇƀƙ Ĭ!ƦǁĂƀƙ ǂƶǏƓɳ Ŏ5 ƱŏƱƤƙ!ƒ ĬǁƵ ǇŏǏƑƓǀ!ƒ lĂƵƥ

ƘƓŏǁǏƵ Ŏ5 ƓnjǏƒƥƤƙƪŬ ƘŬƓƮƙŬƒĂ ƘƓǏĂǁƶǏ!ƒ ƓŏɳĂ!ĂǇǂƙ ƘƒĂƥƀ ƓnjƙƓŏǁǂĂ ǂƶǏƓɳ!ƒ

.ǂƀǁƱ!ƒ ƉŏǁƶƙĂ Ɖǁƶƙ

- ƓŏɳĂ!ĂǇǂƙ ƘƒĂƥƉ ƉƒƥƤƙƪƒ Ĭǁ Ƶ ǁĂƀƙ ǂƶǏƓɳ Ŏ5 ƩŏƨƥƙƮƒ ǂƑŏǇ ƇƓưƵƉ ƔŏƨƥƙƮ

.ƉŏǁƶƙƮƒ Ŏ5 ǂƛŏƥơ!ƒ ƘŬƓƮƙŬƒĂ ƘƓǏĂǁƶǏ!ƒ

- ƘƓǏĂǁƶǏ!ƒ ƓŏɳĂ!ĂǇǂƙ ƘƒĂƥƉ ƉƒƥƤƙƪƒ ƴƥƒĂ ǇƵ ƧƬǂǁ! ăƨƤƉ ǂƪƒƨƥ ƇƒƨɳƦ

.ăƨƤŪƒ ǂŏƥĂƶƪ!ƒ ƘƓƶǏƓɳ!ƒ Ŏ5 ǂƛŏƥơ!ƒ ƘŬƓƮƙŬƒĂ

- Ŏ5 ƘŬƓƮƙŬƒĂ ƘƓǏĂǁƶǏ!ƒ ƓŏɳĂ!ĂǇǂƙ ƘƒĂƥƉ ƉƒƥƤƙƪŬ ƝɳĂƙ!ƒ Ĭǁ Ƶ ǂƀǁƱ!ƒ ƴŏɳƬƙ

.ǇǂǏƉ ƓǏ ƉnjǏǁƶƙ ƘƓŏǁǏƵ

[illegible]

[illegible]

[illegible] .(2007) [illegible] 248- :(1)1 [illegible] .279

[illegible] .(2011) [illegible]

[illegible] .(2009) [illegible]

[illegible] .(2005) [illegible]

[illegible] .(2013) [illegible] 2013/5/5 [illegible] .www.ut.edu.sa

[illegible] .(2008) [illegible]

[illegible] .(2010) [illegible]
[illegible]
[illegible]
[illegible] 3-3 [illegible] 2010.

[illegible] .(2007) [illegible]
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[illegible] .(2013) [illegible]
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الرقم	الفقرات	مناسبة القفرة		وضوح الصياغة		انتماء الفقرة للمجال		التعديل	ملاحظات
		مناسبة	غير مناسبة	واضحة	غير واضحة	منتمية	غير منتمية		
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الرقم	الفقرات	مناسبة القفرة		وضوح الصياغة		انتماء الفقرة للمجال		التعديل	ملاحظات
		مناسبة	غير مناسبة	واضحة	غير واضحة	منتمية	غير منتمية		
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28	LMS .DžŏŇƶƙ!ƒ lƧƒþǗ DžǴƱǉ ƧŏƼĂƙ								
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36	Photoshop ŧŏƞďžƧŀ								
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الرقم	الفقرات	مناسبة الفقرة		وضوح الصياغة		انتماء الفقرة للمجال		التعديل	ملاحظات
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(ŋ) 5ѲŧĎž

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كلية التربية
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إلى من يهمه الامر

الموضوع: تسهيل مهمة الطالب عبدالله بن مفلح العنزي

تحية طيبة وبعد،،،،،

يقوم الطالب **عبدالله بن مفلح العنزي**، ورقمه الجامعي (٢٠١٠٤٠٣٠٤٨)، بدراسة بعنوان **"واقع استخدام أدوات تكنولوجيا المعلومات والاتصالات الحديثة في جامعة تبوك من وجهة نظر الطلبة"**، وذلك استكمالا لمتطلبات الحصول على درجة ماجستير في التربية، تخصص تقنيات التعليم. ويستدعي ذلك تطبيق أداة الدراسة (استبانه) على عينة من طلاب جامعة تبوك في المملكة العربية السعودية.

أرجو التكرم بالاطلاع والموافقة على تسهيل مهمة الطالب المذكور أعلاه.

شاكرا لكم حسن تعاونكم مع الجامعة

وتفضلوا بقبول فائق الاحترام،،،

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الملحقية الثقافية
عمان

١٠٣٩٨١٠٤٨٤

معالي مدير جامعة تبوك   سلمه الله

السلام عليكم ورحمة الله بركاته...وبعد:

إشارة لخطاب عميد كلية التربية رقم ك ت/١٠٧/١٨/٣٤٥ وتاريخ ٢٠١٣/٤/١٧م (المرفق صورته) والمتضمن طلب تسهيل مهمة الطالب/ **عبد الله بن مفلح العنزي**، الملتحق بجامعة **اليرموك** في تخصص **تقنيات التعليم** لمرحلة **الماجستير** في إجراء بحث ميداني وجمع معلومات تتعلق ببحثه لرسالة الماجستير التي هي بعنوان **(واقع استخدام أدوات تكنولوجيا المعلومات والاتصالات الحديثة في جامعة تبوك من وجهة نظر الطلبة)**.

نأمل التلطف بالنظر في امكانية تسهيل مهمة المذكور وموافاتنا بموافقتكم على ذلك.

ولمعاليكم تحياتي وتقديري،،،

الملحق الثقافي السعودي في الأردن بالإنابة

أ.راشد بن عبد الله بن سعد النابت

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University of Tabuk
Vice Presidency for Graduate Studies and Scientific Research
Deanship of Scientific Research



المملكة العربية السعودية
وزارة التعليم العالي
جامعة تبوك
وكالة الجامعة للدراسات العليا والبحث العلمي
عمادة البحث العلمي

سعادة عميد حفظه الله

السلام عليكم ورحمة الله وبركاته

تهديكم عمادة البحث العلمي أطيب تحية وتقدير وتفيد سعادتكم بشأن الطلب المقدم من الطالب/ عبدالله بن مفلح العنزي لتطبيق أداة الدراسة لأطروحته للماجستير المقدمة بجامعة اليرموك بعنوان "واقع استخدام أدوات تكنولوجيا المعلومات والاتصالات الحديثة في جامعة تبوك من وجهة نظر الطلبة"

نأمل التكرم باتخاذ ما ترونه مناسباً لتسهيل مهمة الباحث في تطبيق أداة الدراسة وتوزيعها على الأقسام بالكلية.

وتقبلوا سعادتكم خالص تحياتي وتقديري ...

عميد البحث العلمي

د. فهد بن مسعد اللهيبي

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Abstract

Anzi, Abdullah bin Mofleh. The Status of Using Modern Information and Communication Technology Tools at Tabouk University as Perceived by Students

Preparation

Abdullah bin Mofleh Anzi

.Master Thesis, Yarmouk University, 2013

(Supervisor: d. Imad Mahmoud Ahawaagafh)

This study aimed to identify the reality of the use of IT tools of modern information and communication at the University of Tabuk from the point of view of the students. The study population of (12870) students were selected stratified random sample of them 5% of the study population, at (644) students, and used in the study questionnaire consisted of three areas: availability and use and the difficulties faced by the use of information technology tools and modern communications in University of Tabuk, The study results showed that the estimates of the study sample clauses resolution in the three areas were moderately in general with the exception of some paragraphs were highly, including in the area of availability of paragraph "The University provides hardware data display (DATASHOW) in the halls faculty," In the degree of the use of information technology tools and communication came paragraph "following the students their education (grades) through a system of electronic linking of the university" in the first place and degree of slightly elevated, and in the degree of the difficulties faced by the use of information technology tools and communication came first prize and highly little paragraph (66) which states that "faculty members convictions that the best way to teach is the lecture." In addition, the results show a statistically significant difference due to sex in favor of females, and there is no any differences attributable to the College. The study recommended the invitation planners at the University of Tabuk to adopt a strategic plan to provide the University and colleges tools information and communication technology to be used in the processes of

learning and teaching students, training of faculty members at the University of Tabuk on the use of information technology tools and communication technology in education, and conduct a further study to detect the reality of the use of information technology tools and modern communications in other Saudi universities.

Keywords: information technology tools and modern communications. University of Tabuk. Students